

The Preload Function

6 min

If you've ever web-surfed with poor internet connection—you know firsthand that images can take a while to show up, even if other parts of the page load just fine.

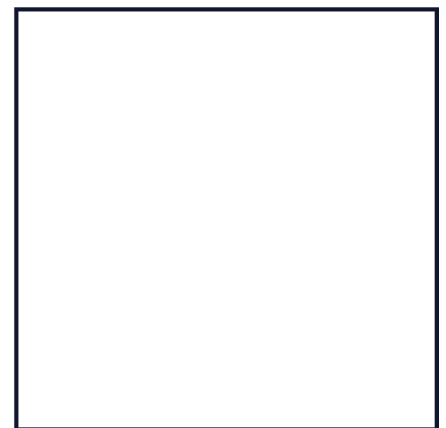
This same behavior applies to p5.js sketches. Loading images takes time, and p5.js will typically move onto other code before an image fully loads.

In the last exercise, this was okay because we drew our image in the infinitely looping `draw()` function. Even if the image wasn't loaded when the `image()` function was first called, it eventually could be drawn to the canvas.

But sometimes, it's important that images are completely loaded before we attempt to draw them. For example, check out what happens when we try to load and draw the image within the `setup()` function:

```
setup() {  
  img = loadImage('image.jpg');  
  background(200);  
  image(img, 0, 0);  
}
```

```
draw() {  
  //loops infinitely  
}
```



p5 Canvas

Here, the image never shows up! By the time the `image()` function is called, the image isn't fully loaded yet. The `setup()` function runs only once, so the image is not eventually drawn.

To solve problems like this, p5.js includes the `preload()` function. Like the `setup()` and `draw()` functions, it's a special function to hold specific kinds of code for our p5.js sketch. Specifically, the `preload()` function is meant for code that loads external assets, like the `loadImage()` function.

```
let img;

function preload(){
  img = loadImage('myImage.png');
}
```

The p5.js library calls the `preload()` function before the `setup()` and `draw()` functions, which run only once all assets in `preload()` are entirely loaded.

```
let img;

function preload(){
  //This runs first.
  img = loadImage('myImage.png');
}

function setup(){
  //This runs once when all assets in preload() are completely
  loaded.
}

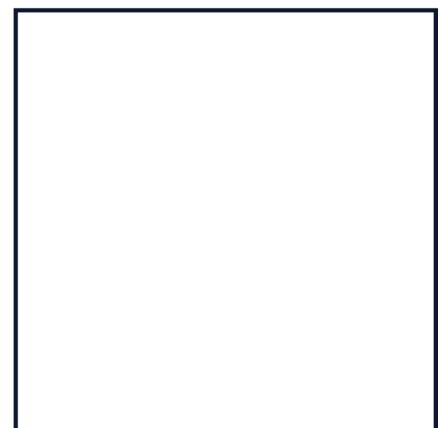
function draw(){
  //This loops infinitely after setup() finishes.
}
```

Let's take a look at our previous scenario, now with the `preload()` function!

```
preload() {
  img = loadImage('image.jpg');
}
```

```
setup() {
  background(200);
  image(img, 0, 0);
}
```

```
draw() {
  //loops infinitely
}
```



p5 Canvas

Our (very adorable) image now draws to the canvas! This is because p5.js waits to run the code in the `setup()` function only after the image is fully loaded.

Instructions

1.

The code currently attempts to draw the image in the `setup()` function. Run the code to observe how the image does not properly draw to the canvas.

2.

Add a `preload()` function to **sketch.js**.

Hint

The syntax for a `preload()` function is:

```
function preload(){  
  //Load images here  
}
```

3.

Move the line of code that loads the image from the `setup()` function, and into the `preload()` function you just added. Run the code—you should now see the image!

Hint

The line containing the `loadImage()` function is what loads the image.

You don't need to modify the way the `loadImage()` call is written—just move the existing code to inside the `preload()` function.